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EXAMINER	
MATTIS, JASON E	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/680,911
Filing Date: October 08, 2003
Appellant(s): TURNER ET AL.

Patrick C. Keane
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4/29/08 appealing from the Office action mailed 9/28/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,842,424	KEY et al.	1-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 has been amended to add the limitation stating, “wherein the increase function is adapted to recover the particular dataflow over a period of time after a decrease in the dataflow rate”. It is unclear what exactly is meant by “recover the particular dataflow”. It is recommended that this phrase be amended to state, “recover the particular dataflow rate” such that it is clear that it is the rate that is being recovered.

Claims 2-7 are rejected since they depend on rejected claim 1.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-5, 8-11 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Key et al. (U.S. Pat. 6842424 B1).

With respect to claim 1, Key et al. discloses a method for network bandwidth utilization **(See the abstract of Key et al. for reference to for adjusting data packet rates according to congestion patterns)**. Key et al. also discloses limiting a particular dataflow injected in a network form a dataflow source to a particular rate **(See the abstract of Key et al. for reference to limiting data packet transmission rates from a particular source)**. Key et al. further discloses marking data packets at a dataflow destination with marks that depend on the level of any intervening network congestion and returning packet marks indicating a degree of network congestion to the dataflow source **(See column 3 lines 10-30 of Key et al. for reference to using early congestion notification, ECN, to mark data packets at destinations to indicate a level of network congestion and for reference to sending the marks back to the**

source). Key et al. further discloses increasing the rate of the dataflow according to an increase function if the packet marks being returned indicate no congestion and decreasing the rate of the dataflow according to a decrease function if the packets marks being returned indicate congestion **(See column 9 lines 24-43 of Key et al. for reference to increasing a congestion window and corresponding data rate when an unmarked acknowledgement is received indicating no congestion and for reference to decreasing the congestion window and corresponding data rate when a marked acknowledgement is received indicating congestion)**. Key et al. also discloses the increase function being adapted to recover the particular dataflow rate over a constant period of time after a decrease in the dataflow rate regardless of the current dataflow rate **(See column 2 lines 58-65 of Key et al. for reference to using linear functions to increase a congestion window size after a decrease meaning the increase to a particular dataflow rate will take a constant time shifted by an initial time regardless of the current dataflow rate)**.

With respect to claim 3, Key et al. discloses decreasing by a function equivalent to the claimed function **(See column 9 lines 24-43 of Key et al. for reference to decreasing the window by ½ bounded by a minimum rate of 0 which corresponds to the MAX(r/m, R_{min}) having m equal to ½ and R_{min} equal to 0)**.

With respect to claims 4 and 5, Key et al. discloses using linear increasing and decreasing functions to adjust inter-packet delay **(See column 2 lines 58-65 of Key et al. for reference to using linear functions to adjust a congestion window size and its corresponding inter-packet delay)**.

With respect to claim 8, Key et al. discloses a network comprising a source node sending data packets in a dataflow to a destination node **(See the abstract of Key et al. for reference to transmitting packets from a source to a destination)**. Key et al. also discloses a rate controller to control the source node packet injection rate **(See column 9 lines 24-43 of Key et al. for reference to a controller adjusting a source node congestion window and corresponding data rate)**. Key et al. further discloses a destination node congestion monitor assessing whether received packets experienced congestion and providing a feedback signal to the rate controller **(See column 3 lines 10-30 of Key et al. for reference to using early congestion notification, ECN, to mark data packets at destinations to indicate a level of network congestion and for reference to sending the marks back to the source)**. Key et al. also discloses that the rate controller is responsive to the feedback signal to adjust the packet rate to minimize congestion and maximize data throughput **(See column 9 lines 24-43 of Key et al. for reference to adjusting the congestion window and corresponding data rate in response to received ECN marks in order to minimize congestion and maximize data throughput)**. Key et al. further discloses the rate controller being adapted to recover the rate of injection over a constant period of time after a decrease in the rate regardless of the current dataflow rate **(See column 2 lines 58-65 of Key et al. for reference to using linear functions to increase a congestion window size after a decrease meaning the increase to a particular dataflow rate will take a constant time shifted by an initial time regardless of the current dataflow rate)**.

With respect to claims 9 and 10, Key et al. discloses the congestion monitor returning marked acknowledgement packets according to congestion for each node received **(See column 9 lines 24-43 of Key et al. for reference to sending packet acknowledgements including an ECN mark indicating whether a corresponding packet experienced congestion)**.

With respect to claim 11, Key et al. discloses that the rate controller can independently and simultaneously control the rates of several data flows **(See column 9 lines 24-43 of Key et al. for reference to congestion being indicated separately on a per packet basis meaning the rate controller can independently and simultaneously control the rates of several data flows corresponding to the separate data packets)**.

With respect to claim 13, Key et al. discloses decreasing by a function equivalent to the claimed function **(See column 9 lines 24-43 of Key et al. for reference to decreasing the window by ½ bounded by a minimum rate of 0 which corresponds to the MAX(r/m, R_{min}) having m equal to ½ and R_{min} equal to 0)**.

Allowable Subject Matter

5. Claims 2, 6, and 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

(10) Response to Argument

In response to Applicant's argument regarding the rejection of claims 1-7 under 35 U.S.C. 112 second paragraph, the Examiner respectfully disagrees. Applicant argues that the term "the particular dataflow" clearly refers to "the particular dataflow" recited in both the "increasing" and "decreasing" steps of claim 1. The Examiner agrees with this argument; however, this argument is moot, since the rejection is not based on a lack of antecedent basis for the term "the particular dataflow". The rejection of claim 1 under 35 U.S.C. 112 second paragraph has been made because it is unclear what the phrase "recover the particular dataflow" means. For example, since the dataflow is never ceased, it is unclear how or why the dataflow itself is recovered. Rather, it is the "rate" of the dataflow that is recovered, not the dataflow itself. Thus, as suggested in the Office Action mailed 9/28/07, it is recommended that this phrase be amended to state, "recover the particular dataflow rate" such that it is clear that it is the rate of the dataflow that is being recovered.

In response to Applicant's argument that the phrase "the period of time being a constant for at least two different dataflow rates", found in current claims 1 and 8, is clear and does find support in the Applicant's original specification, the Examiner agrees with this argument, and thus, the rejection of claims 1-13 under 35 U.S.C. 112 second paragraph for this reason, has been withdrawn.

In response to Applicant's argument that Key et al. (U.S. Patent 6,842,424 B1) does not disclose the limitation stating, "the period of time being a constant value for at least two different dataflow rates", as stated in claims 1 and 8, the Examiner respectfully disagrees. As pointed out by the Applicant's arguments, Key et al. discloses using a linear increase phase (See column 2 lines 58-65 of Key et al.). Applicant's arguments also provide an example where using a linear increase phase causes the period of time it takes to recover a dataflow rate to be a non-constant value for different dataflow rates; however, it is noted that the claim limitation only requires the period of time to be a constant value "for at least two different dataflow rates", and not for every dataflow rate. Thus, assuming a different situation where a first dataflow rate has been cut, i.e. from 100 to 50, and a second dataflow rate has been cut, i.e. from 90 to 40, both of these dataflows would recover their dataflow rate in the same amount of time using the linear increase phase disclosed by Key et al., since they both have the same rate difference (i.e. 100-50=50 and 90-40=50) to recover from. Therefore, the linear increase phase does recover the rate of a dataflow in a period of time being a constant value for at least two different dataflows, as claimed, and thus, Key et al. does anticipate each element of independent claims 1 and 8.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Jason E Mattis/
Examiner, Art Unit 2616

Conferees:

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/FIRMIN BACKER/

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